

FIG. 1

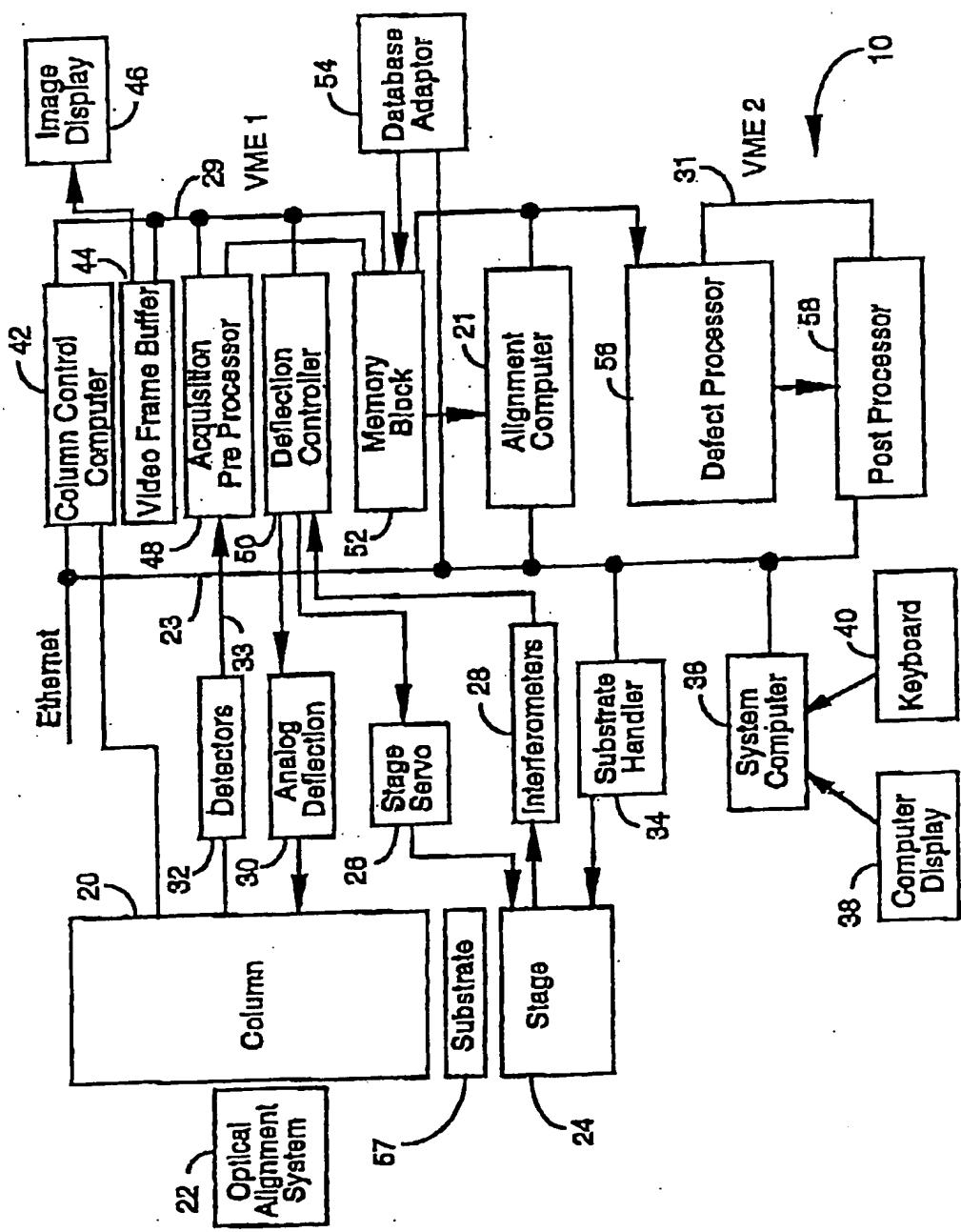


Fig. 2

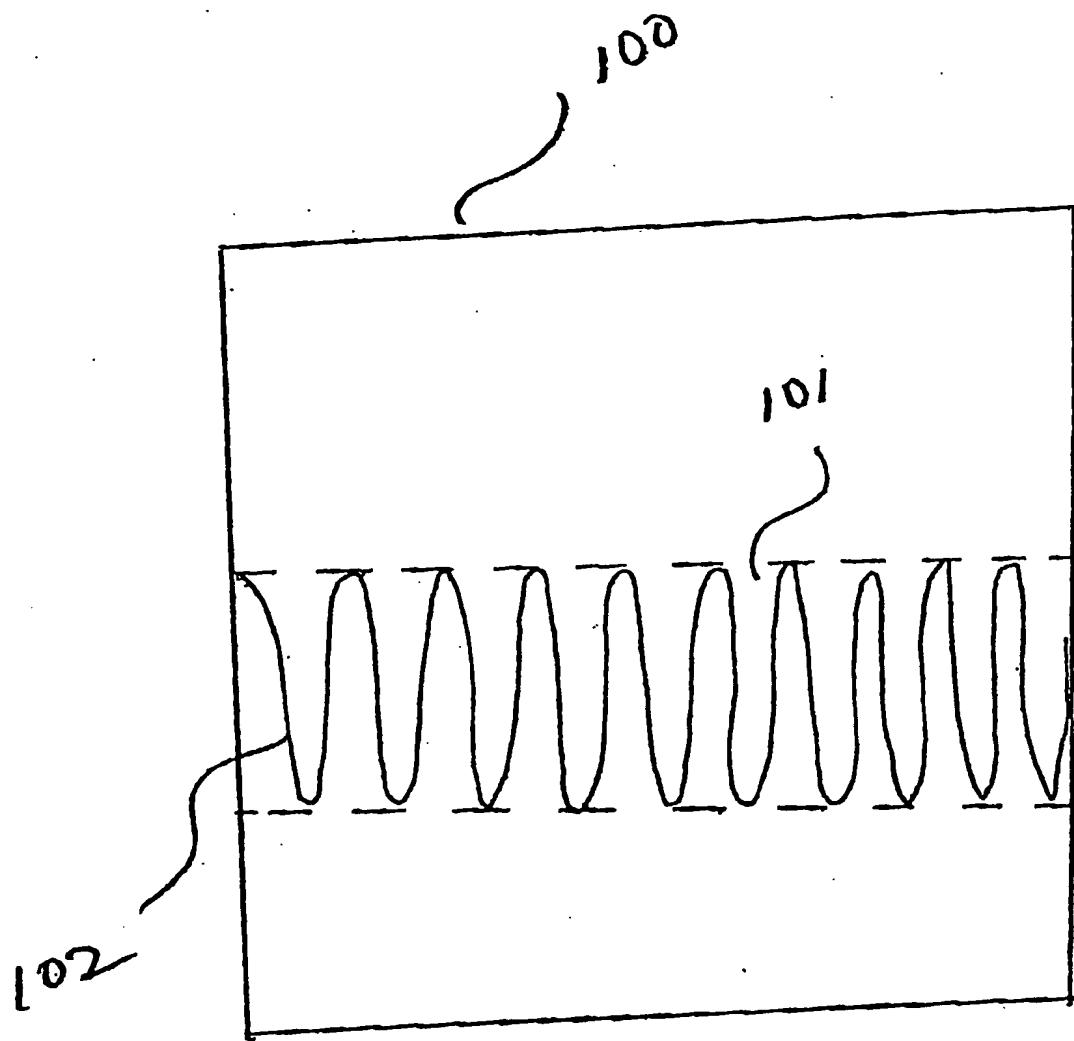
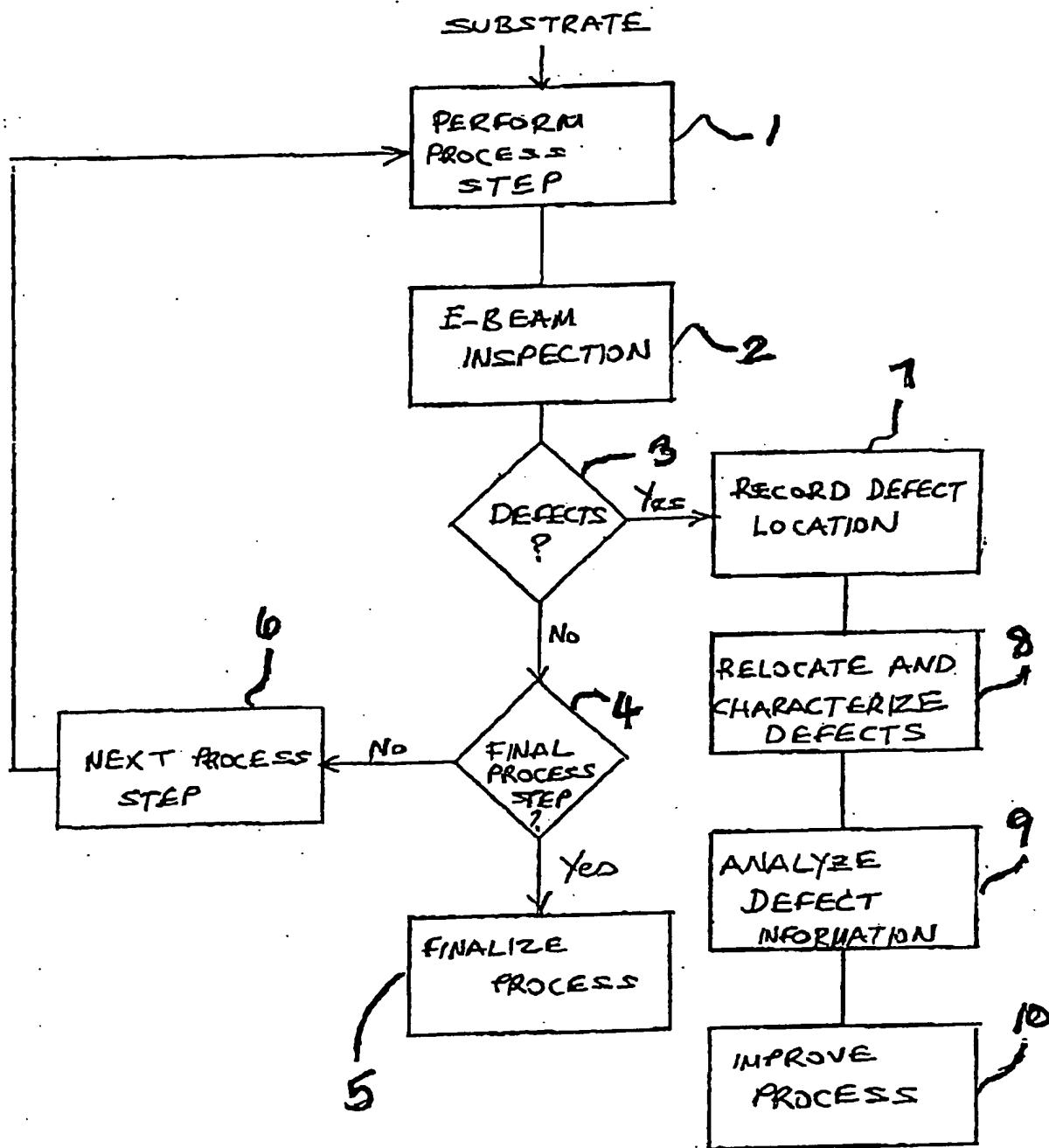
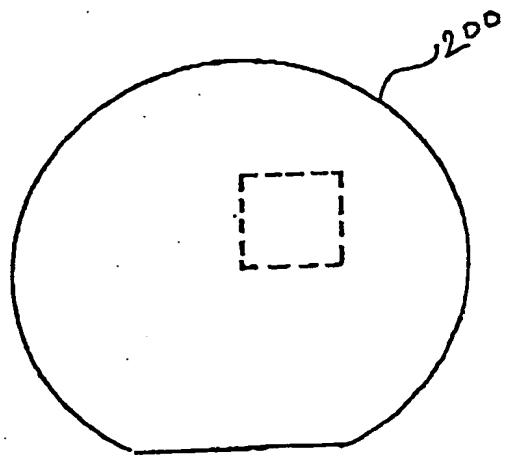


Figure 3



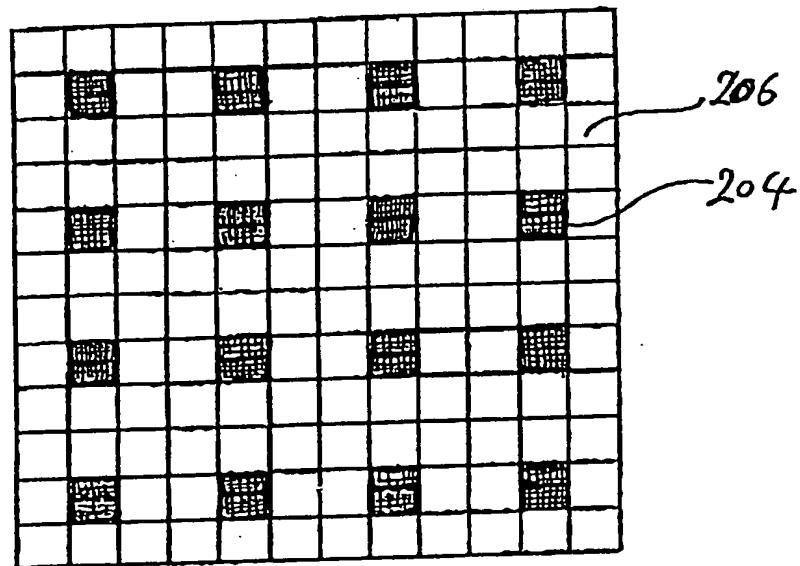
09648095 - 082500

FIGURE 4a



09648095 - 032500

FIGURE 4b



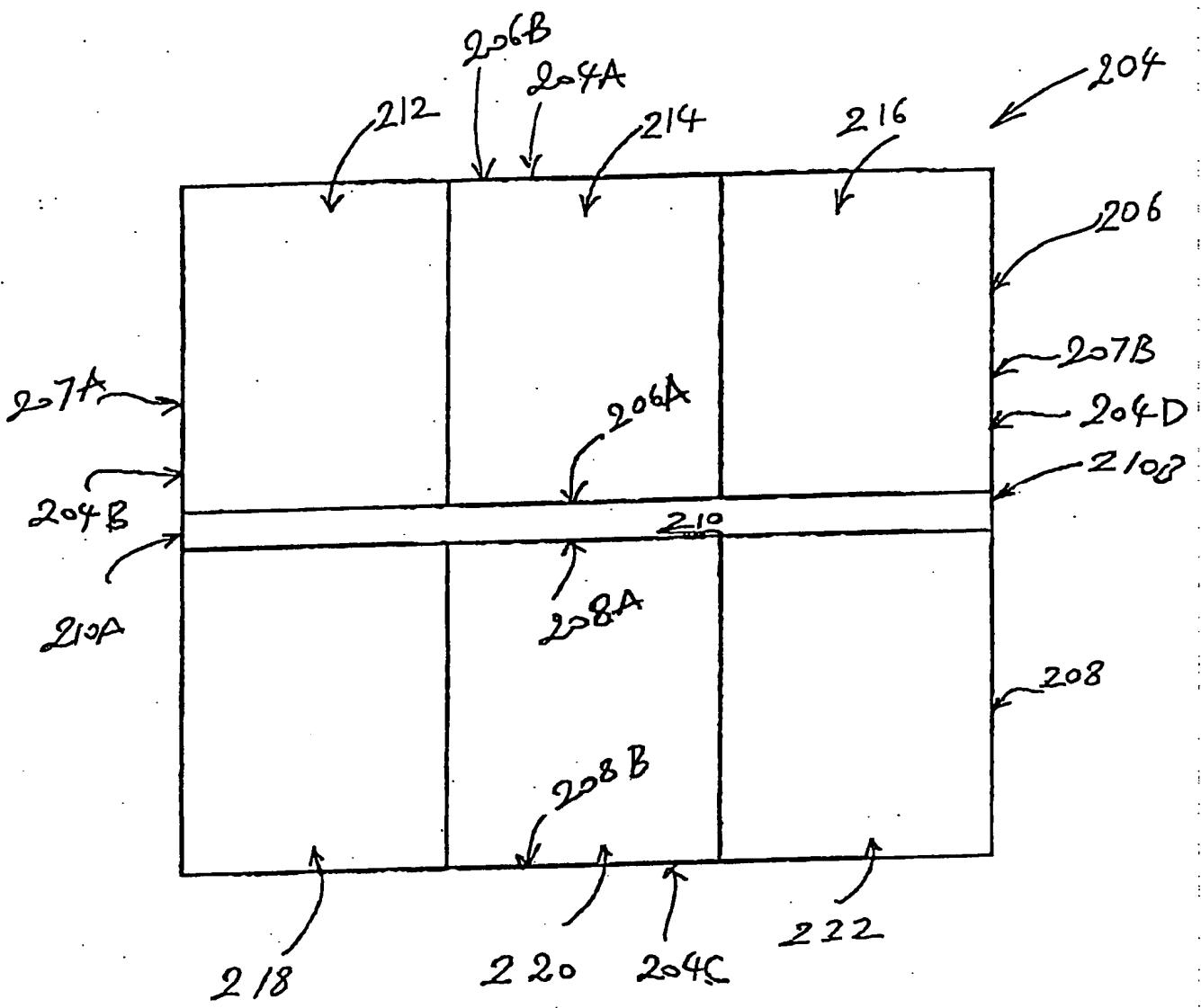


Fig. 4C

002500 - 060500-144800-000000

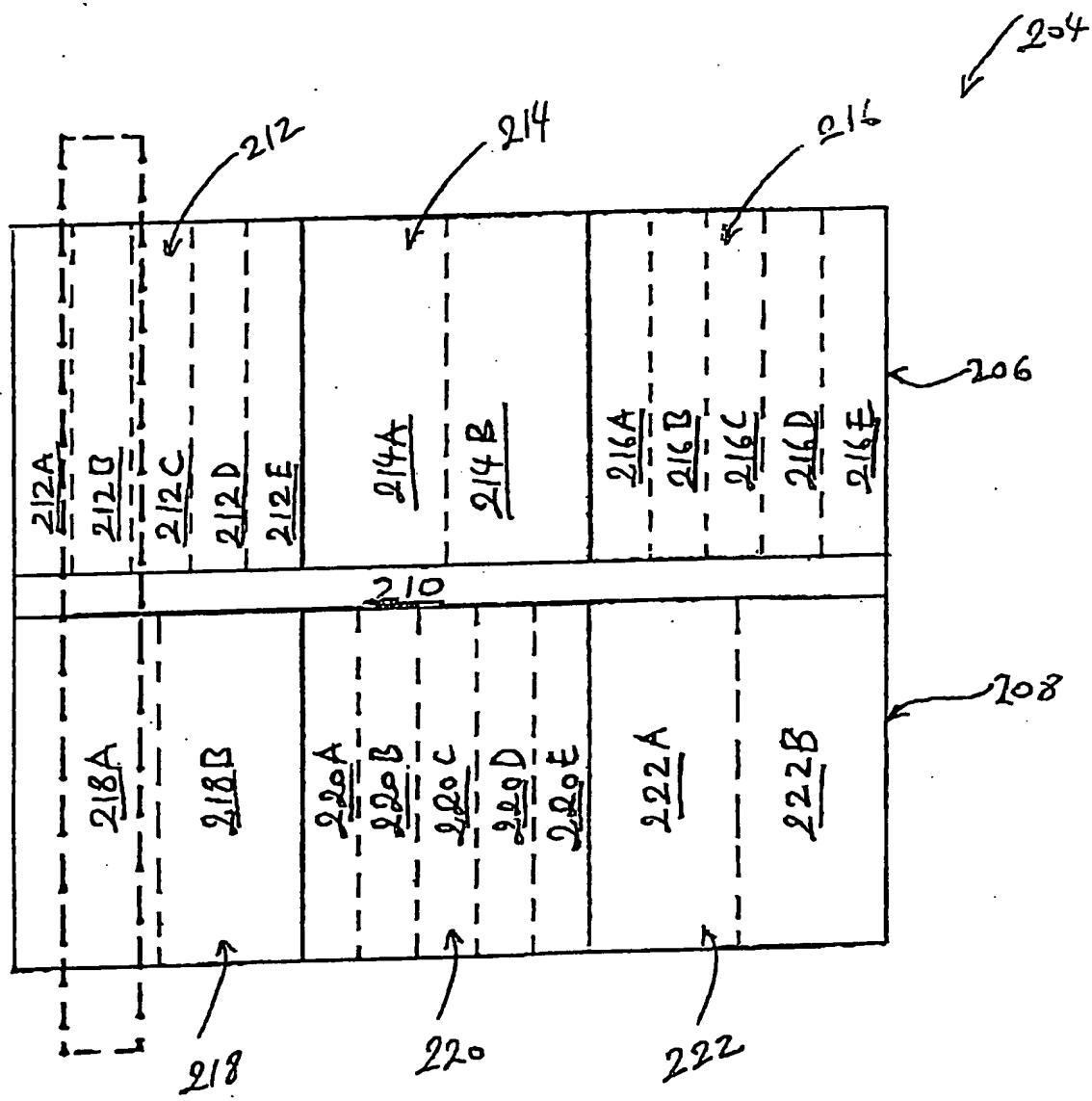


Fig. 4D

FIGURE 5

09548095 - 082500

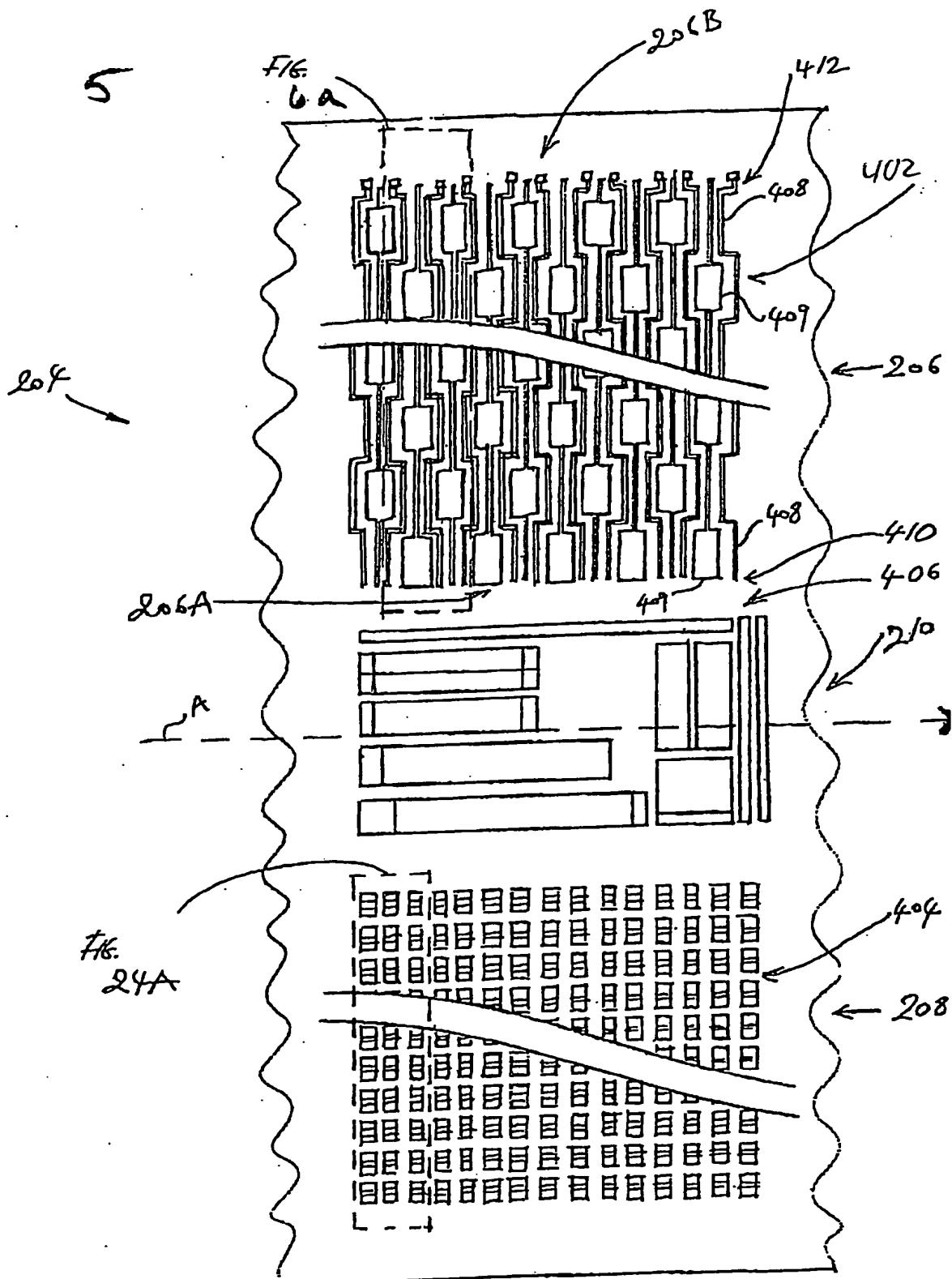
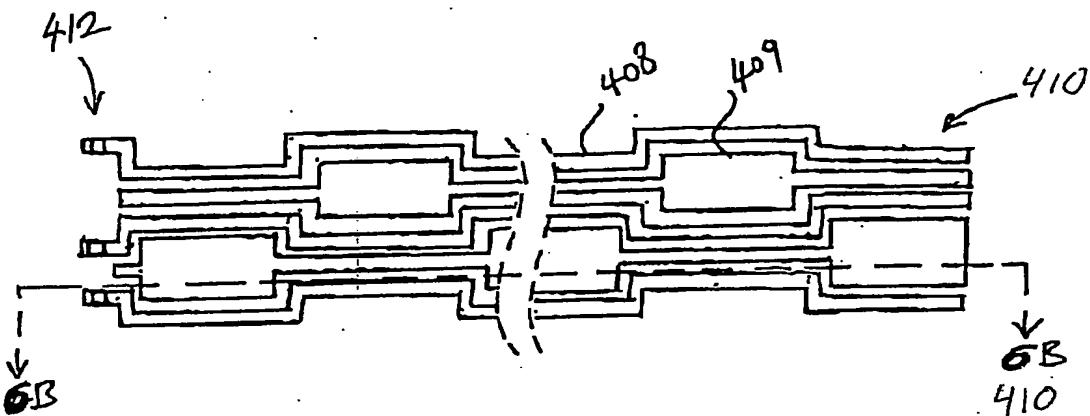


FIGURE 6a



098095-0825001

Fig. 6b

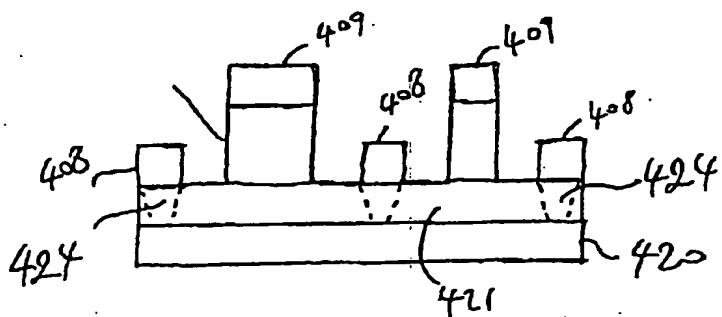
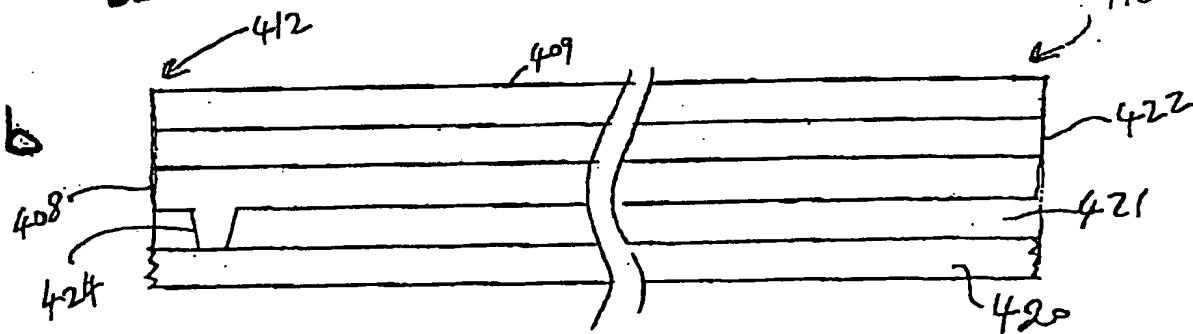


Fig. 6c

Figure 7a

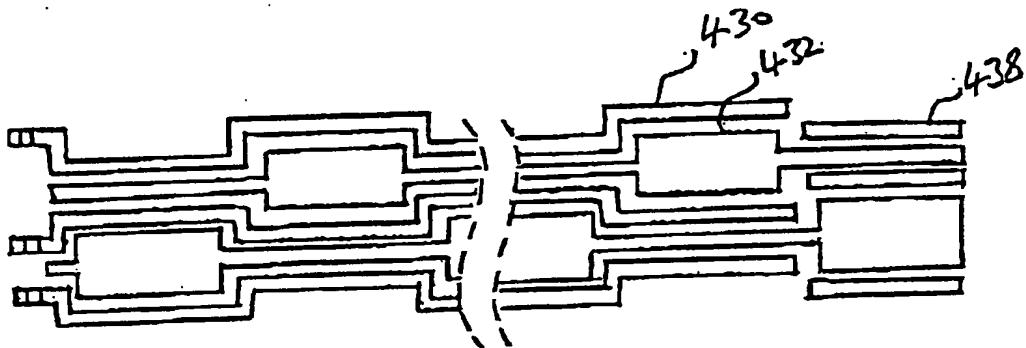
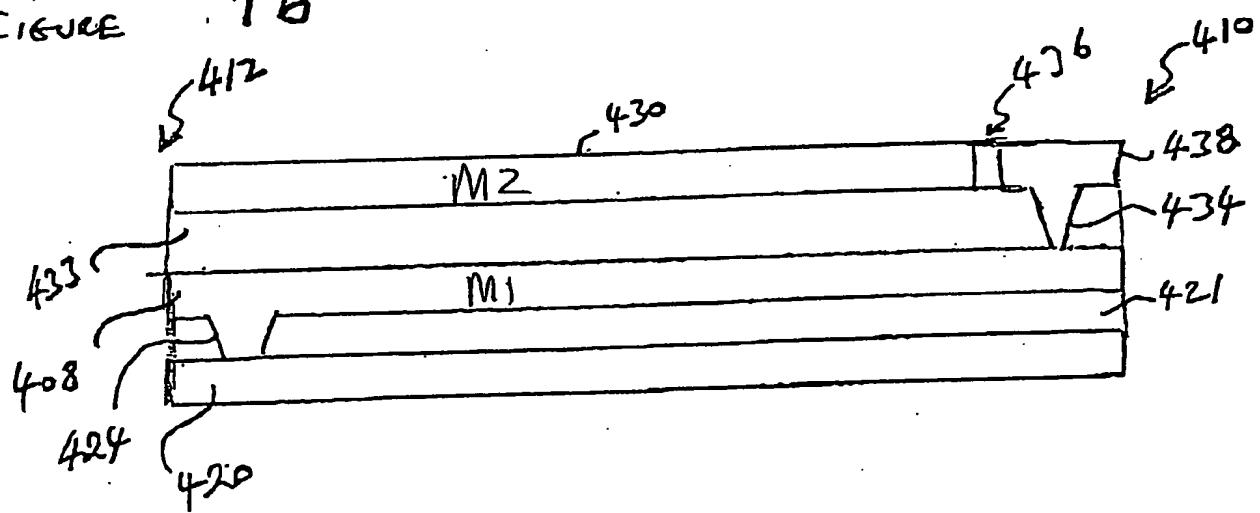
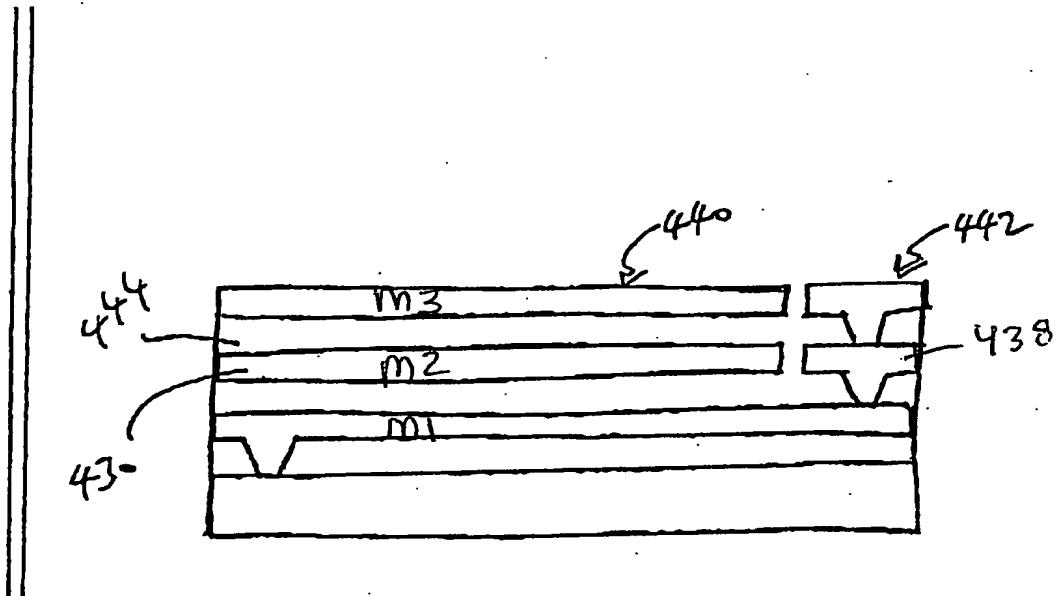


FIGURE 7b



006148005 - 0022500

FIGURE 8



09648005 - 082500

00648095 - 082500

FIGURE

9

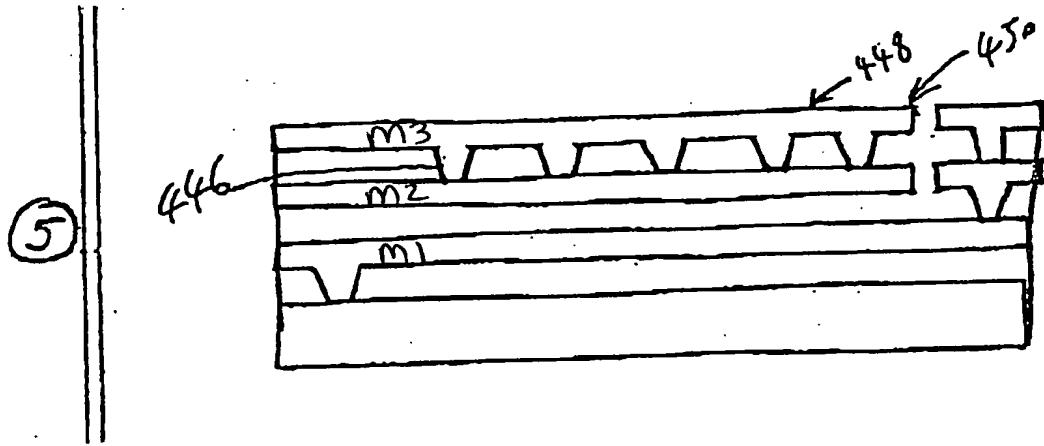


FIGURE 10

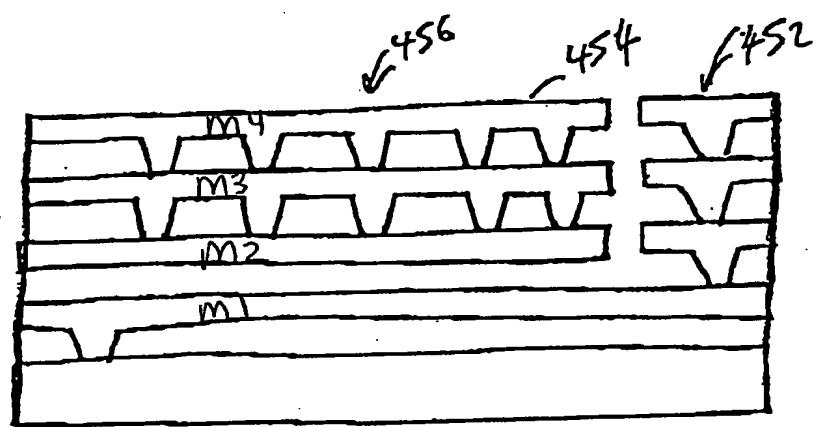


FIGURE
11

00002800-56281960

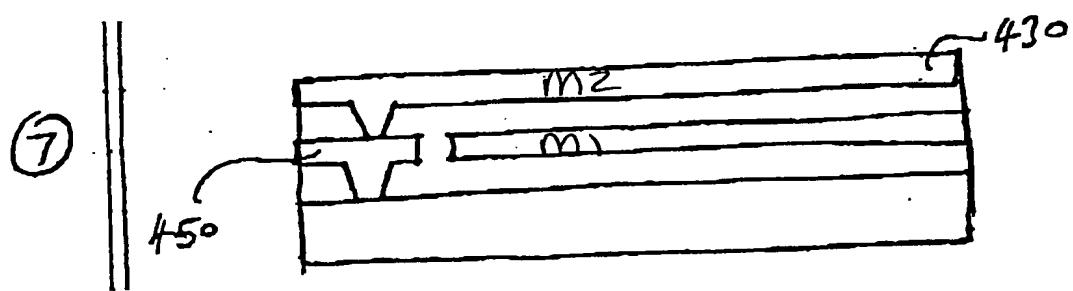


FIGURE 12

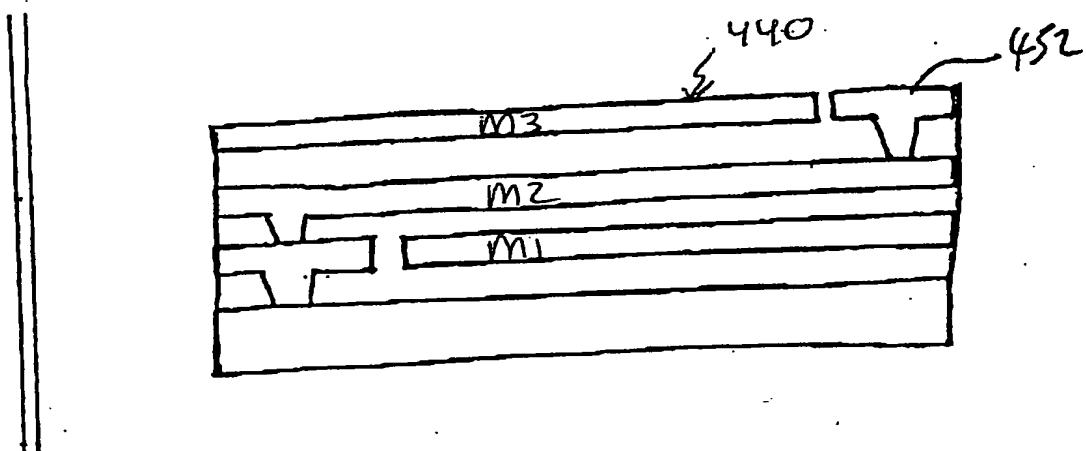
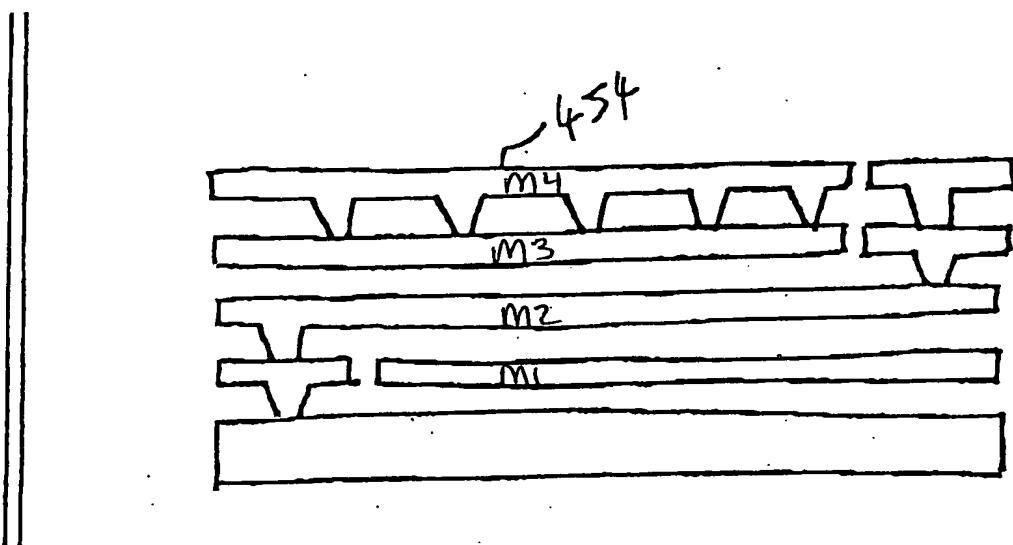
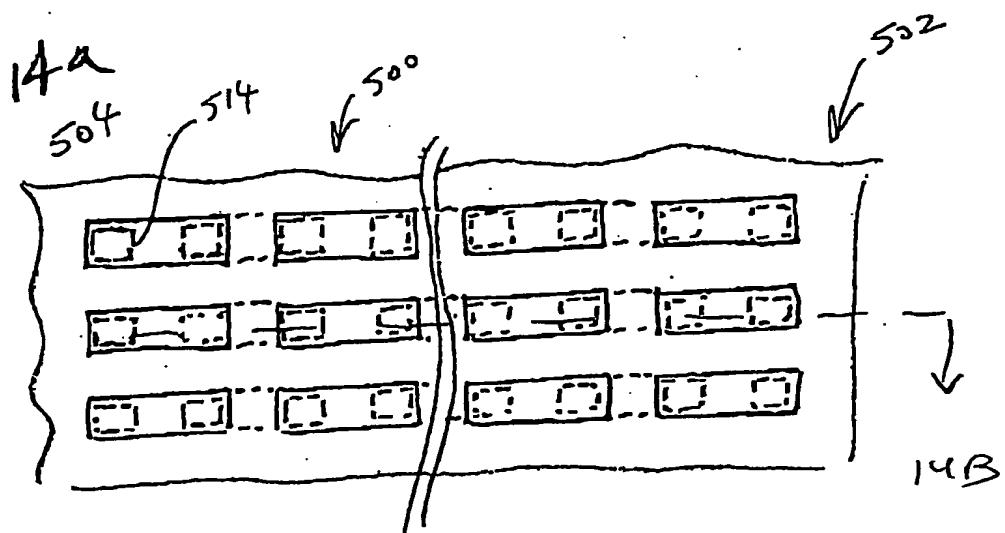


FIGURE 13



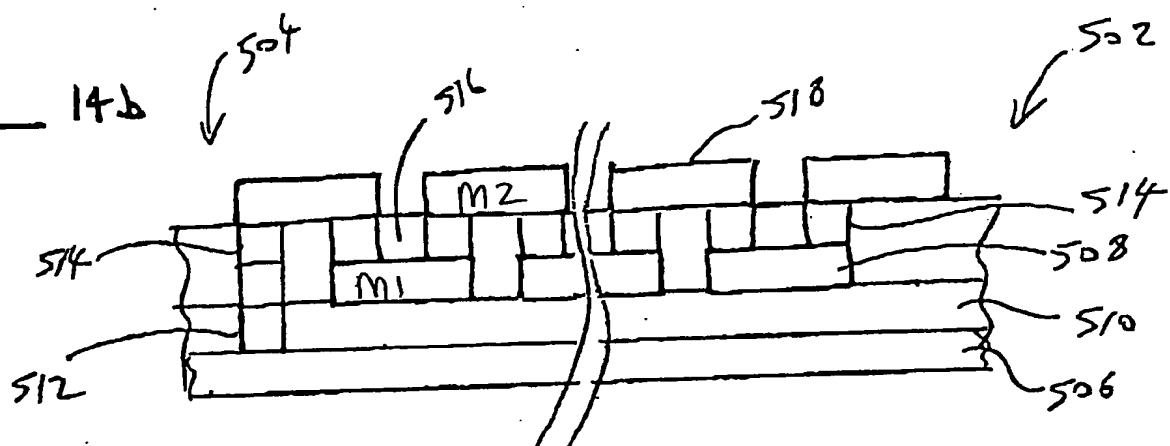
09648095 - 032500

FIGURE

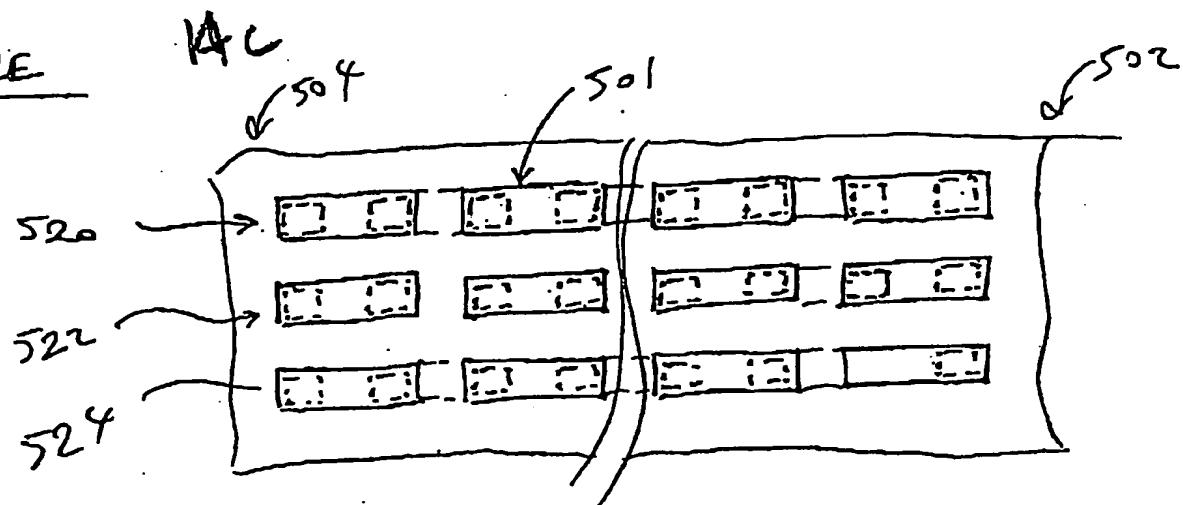


09648095 - 082500

FIGURE



FIGURE



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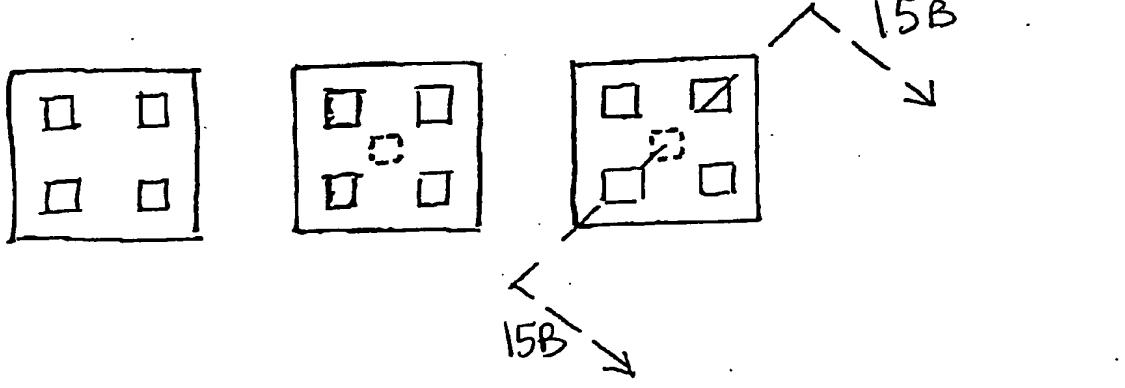
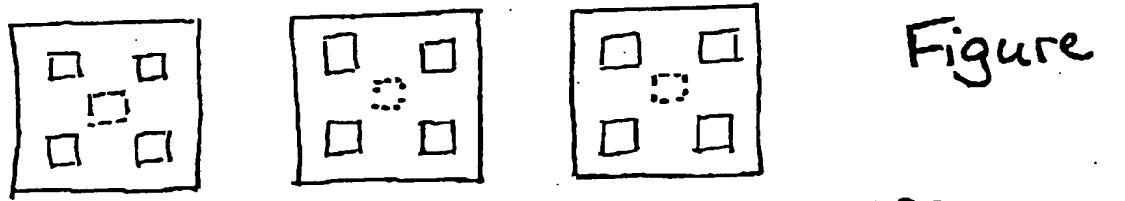
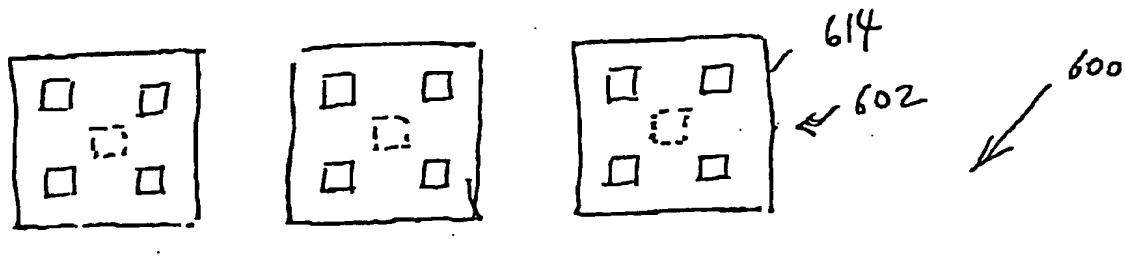


FIGURE 15B

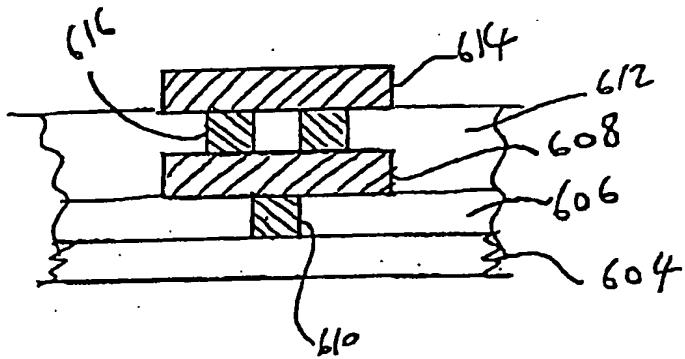


FIGURE 16A

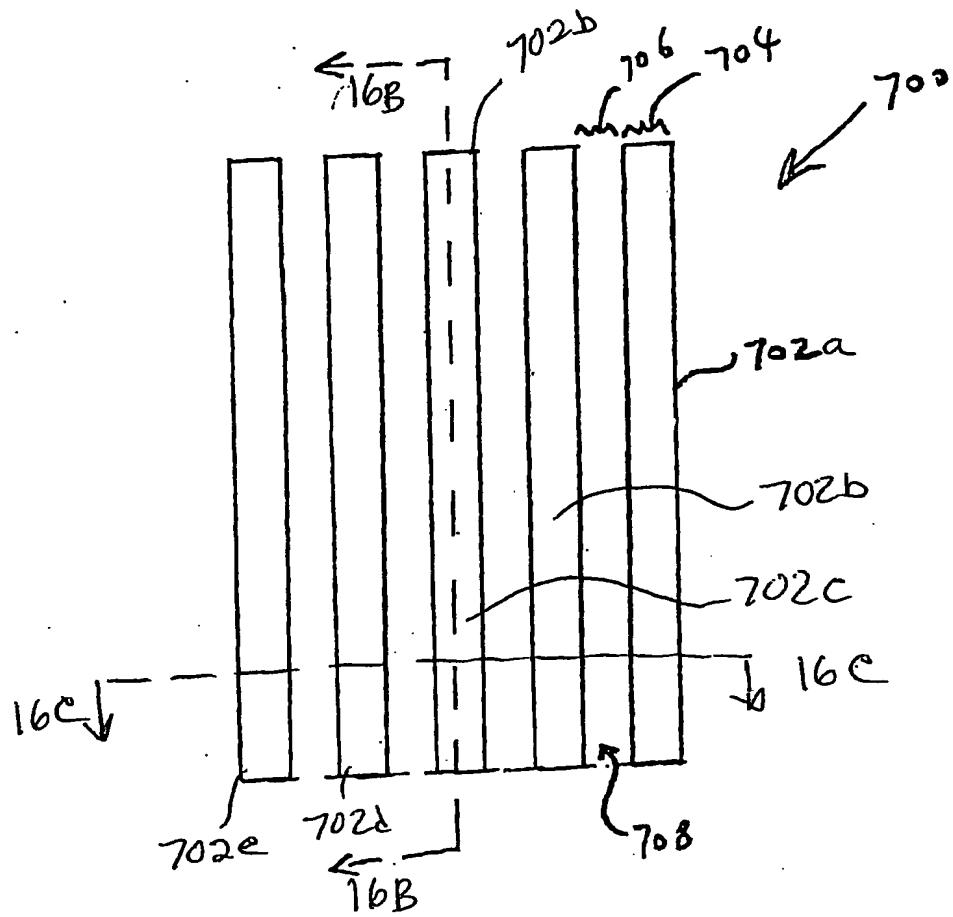


FIGURE 16B

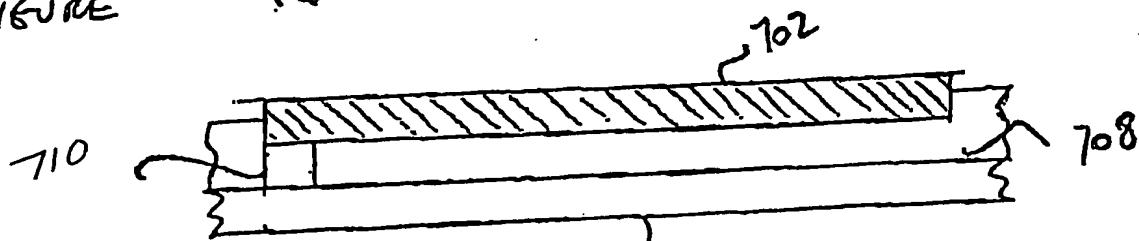
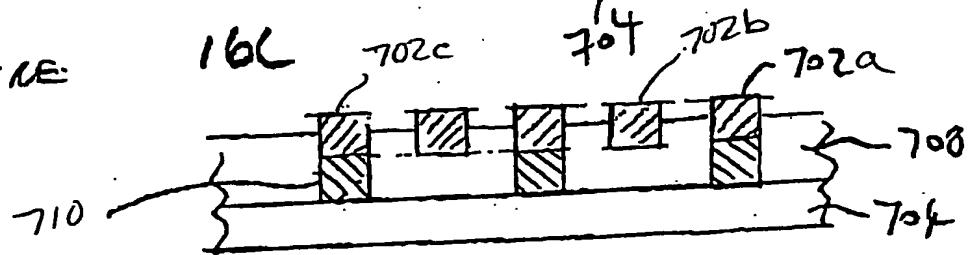
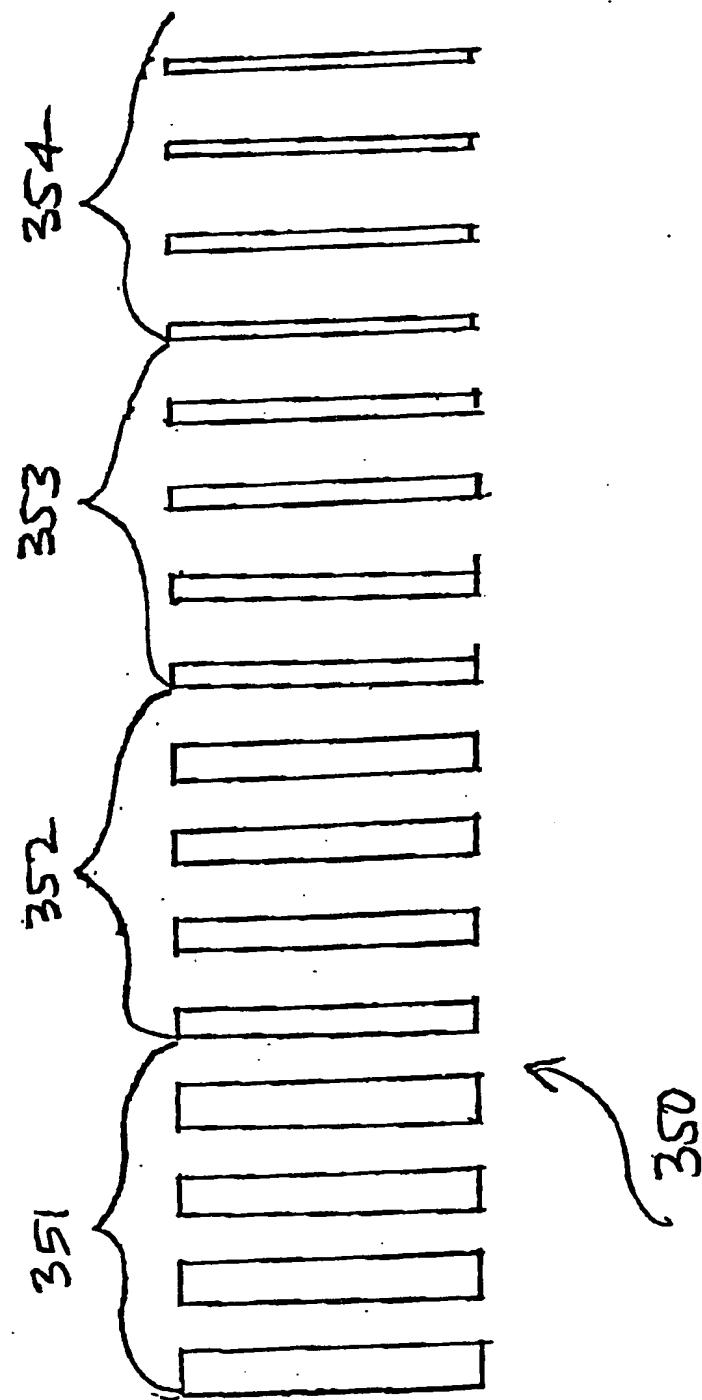


FIGURE 16C



00648095-08200

Fig. 17



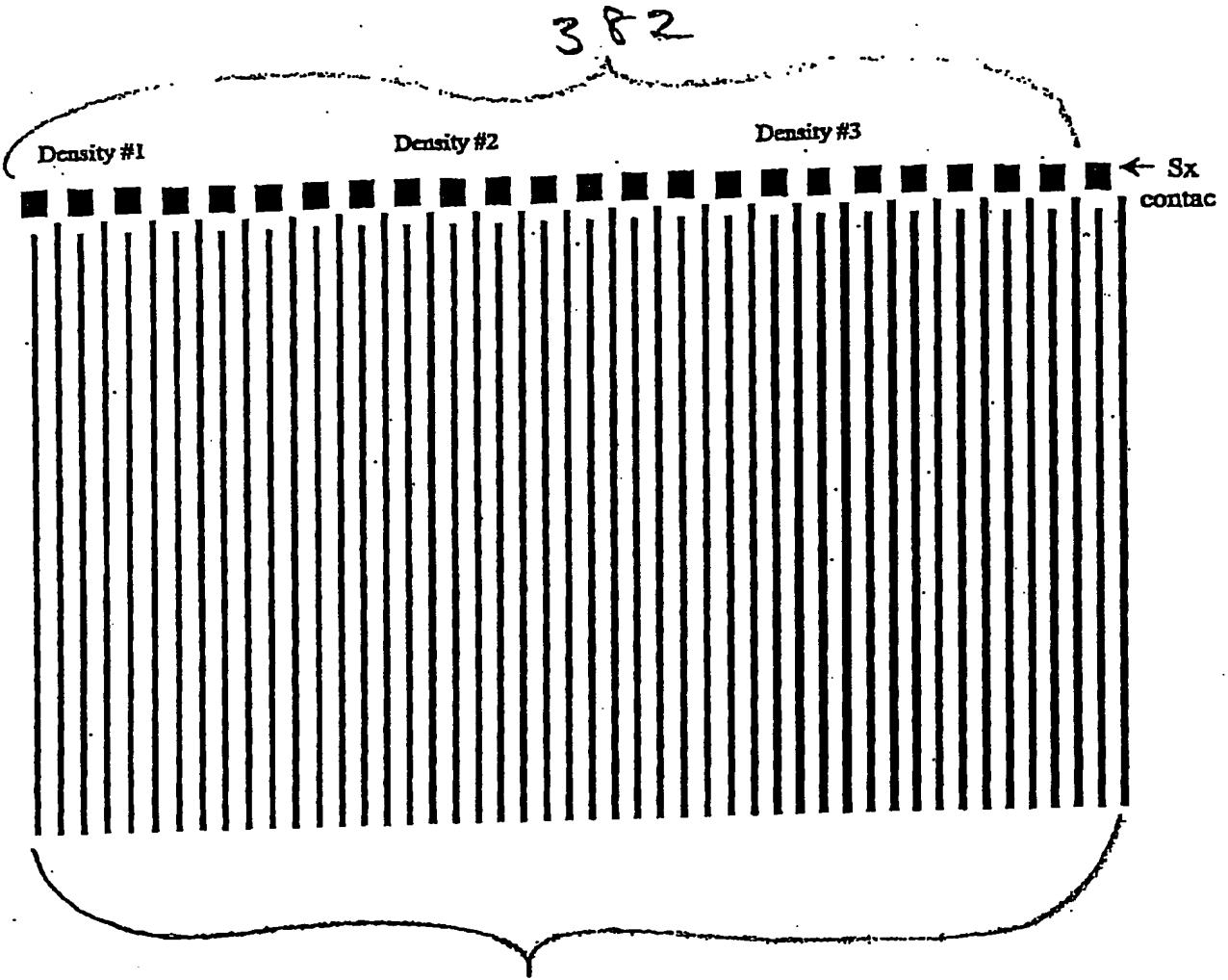


Fig. 18

FIGURE. 19

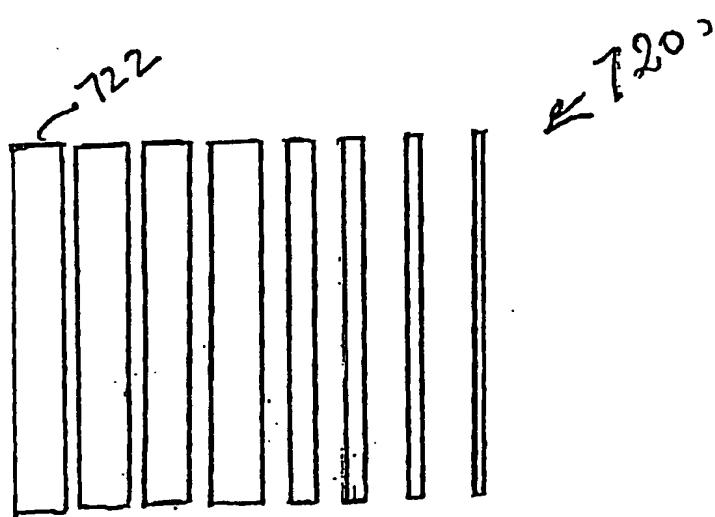
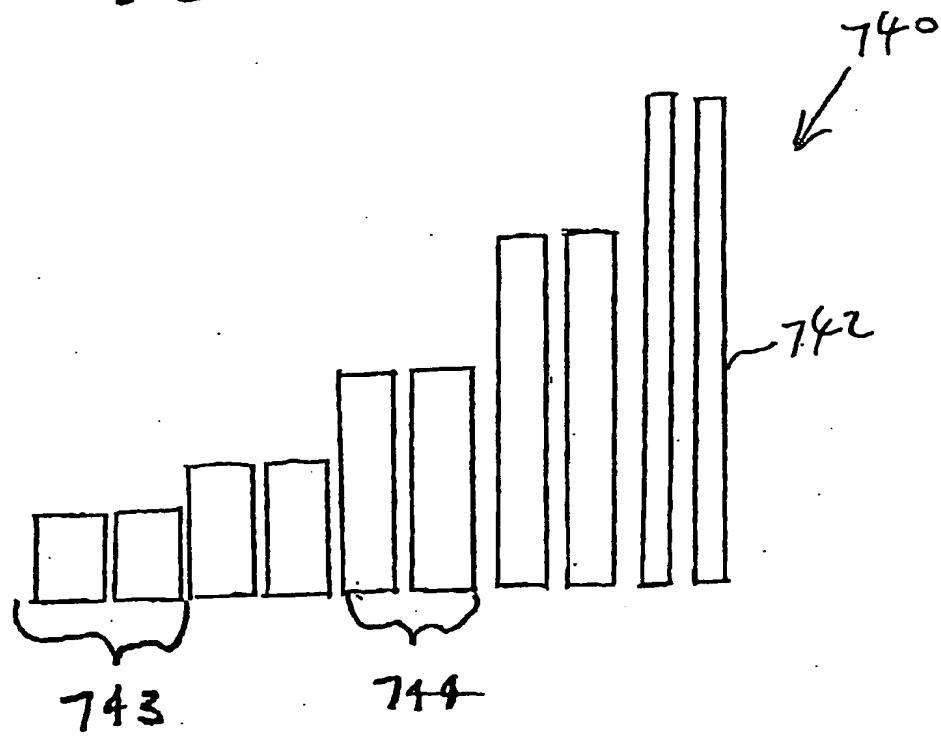


FIGURE 20



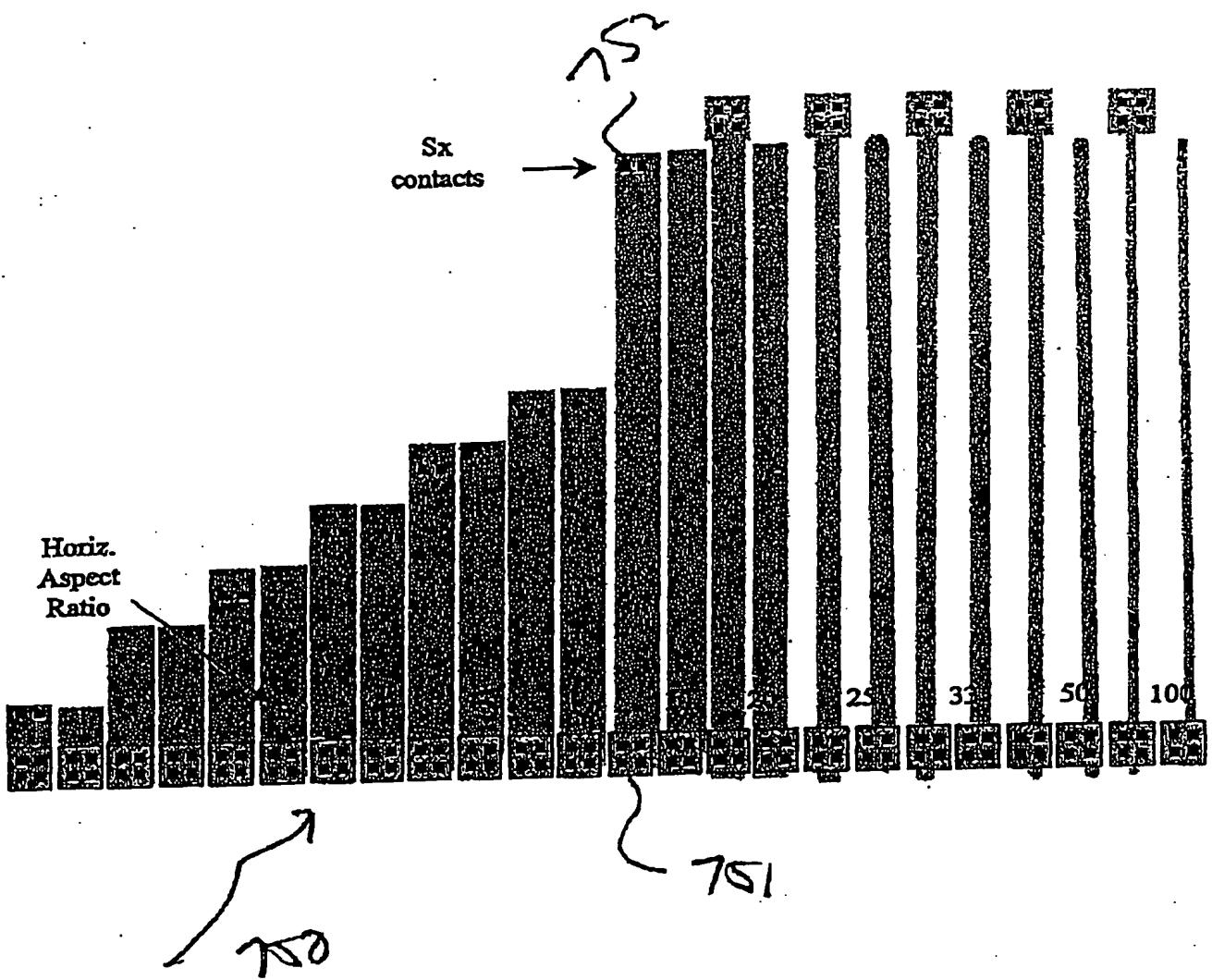


Figure 21

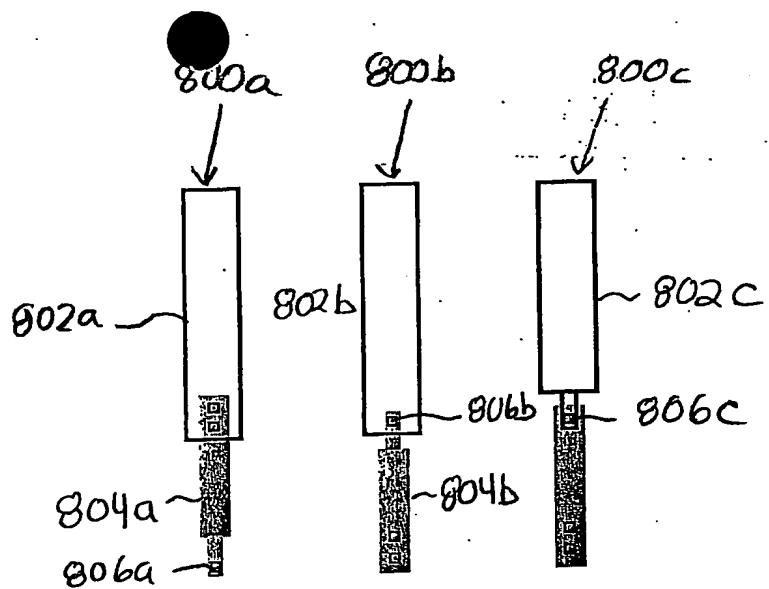


Figure 22A: X Overlay Structures: M1 to Contact, Via to M1, M2 to Via

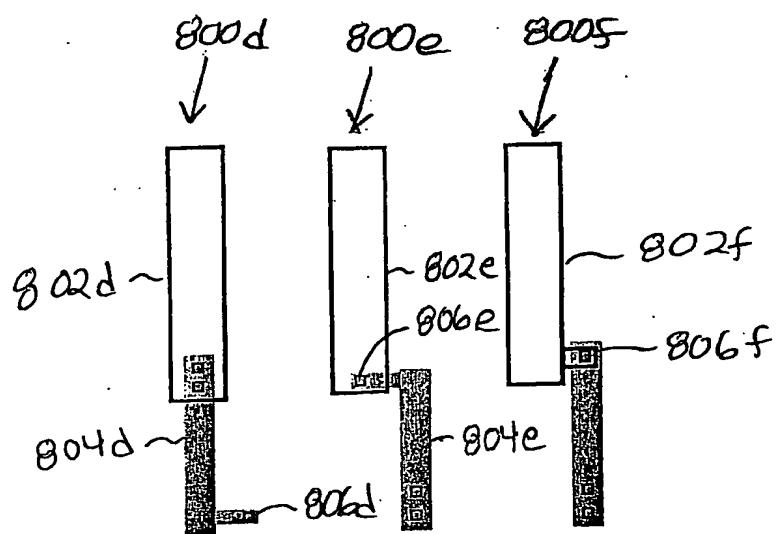


Figure 22B: Y Overlay Structures: M1 to Contact, Via to M1, M2 to Via

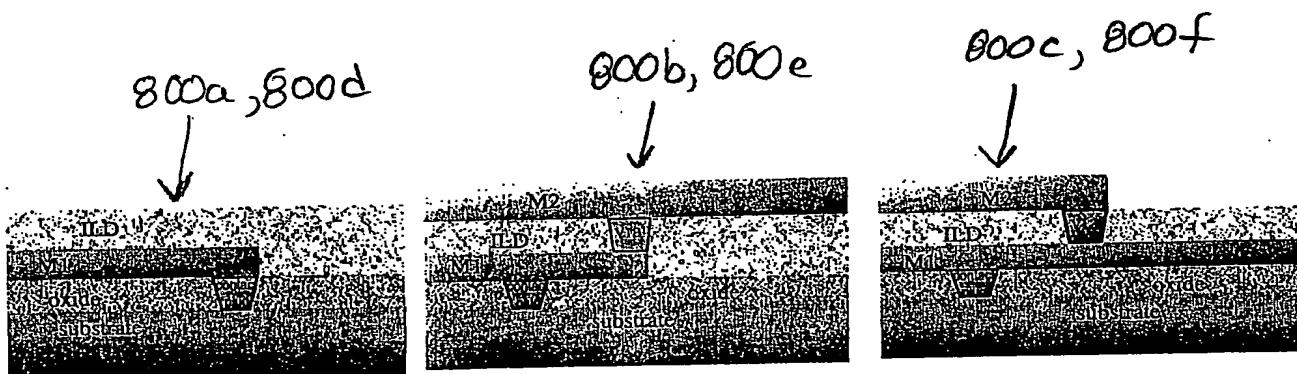


Figure 22C: Cross sections of overlay structures: M1 to Substrate, Via to M1, M2 to Via

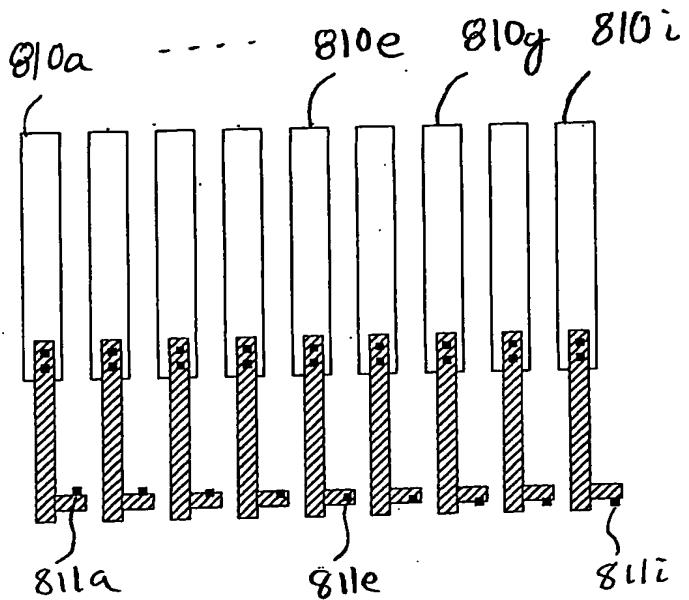


Figure 23A: A portion of the M1 to Contact, Y component, Overlay Structure

09648095 - 022500

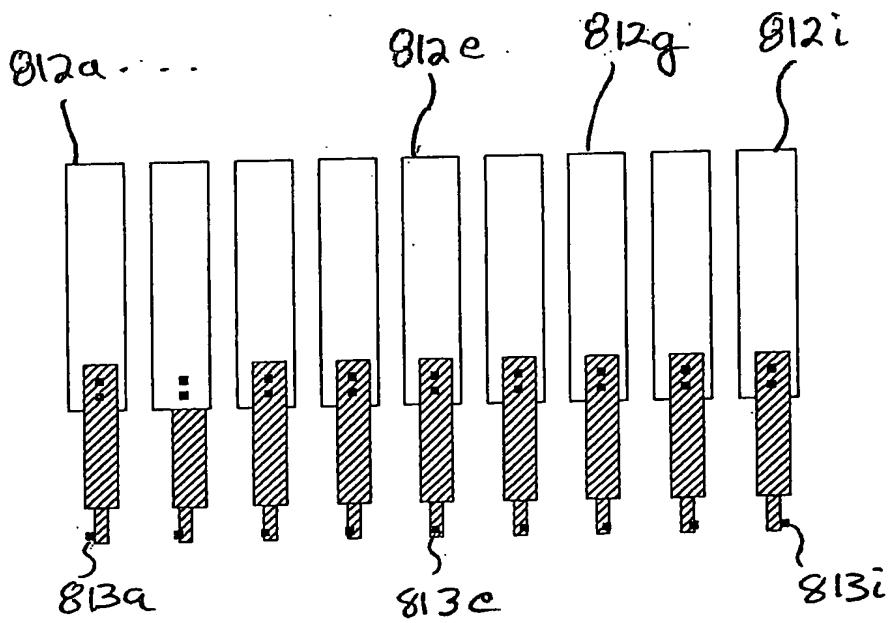
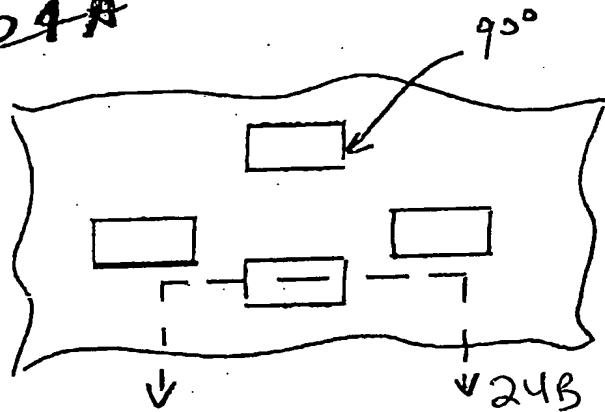


Figure 23B: A portion of the M1 to Contact, X component, Overlay Structure

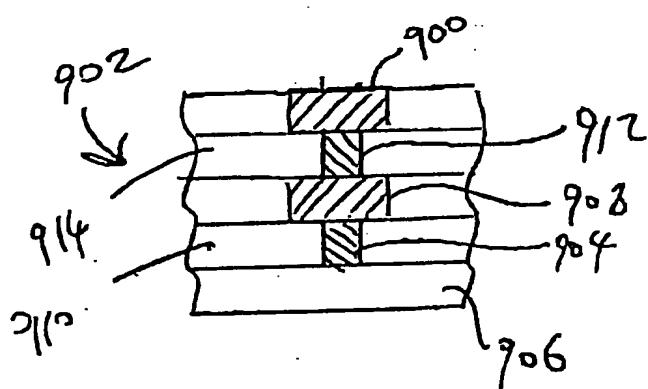
FIGURE

24A



FIGURE

24B



09648095 - 082500

09643095 - 032500

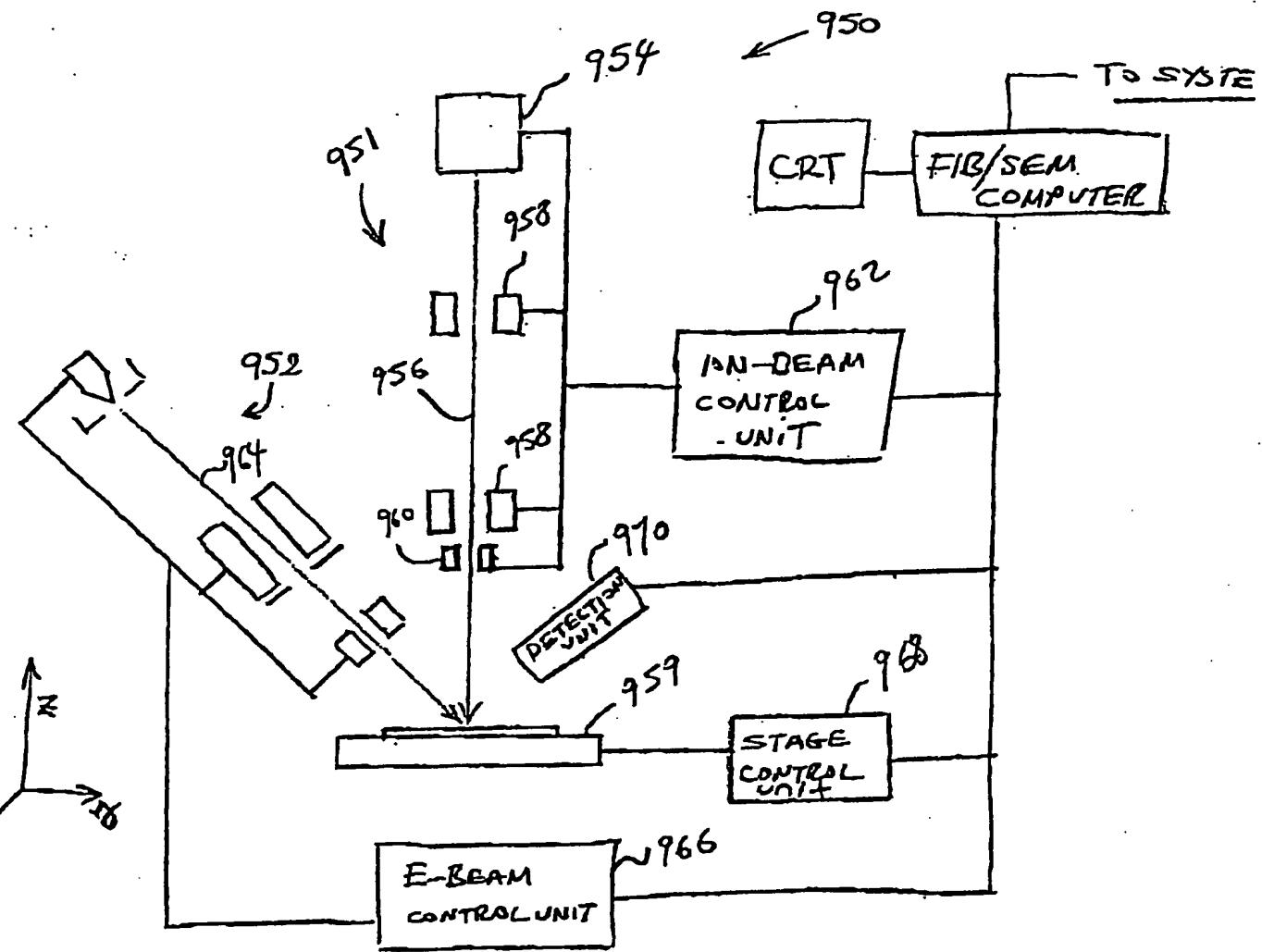


Fig. 25

096548095 - 092500

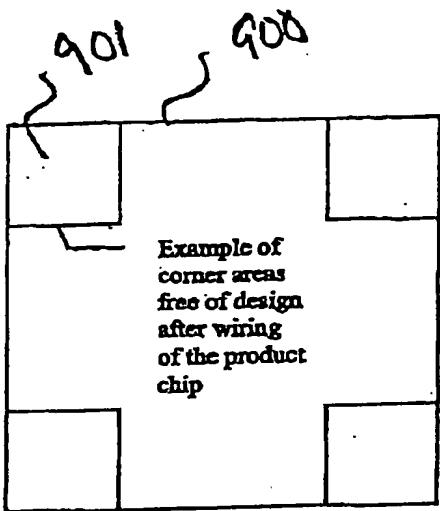


Fig. 26a: Product Chip with empty areas

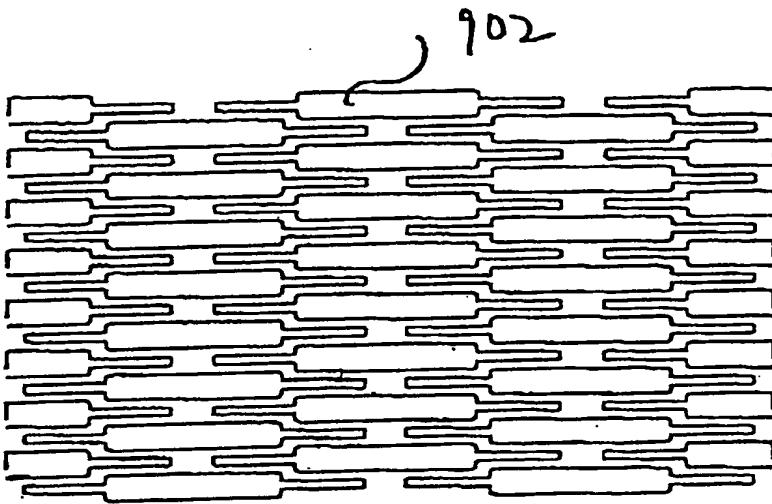


Fig. 26b: Typical "Filler Shapes" used to fill-in the empty areas

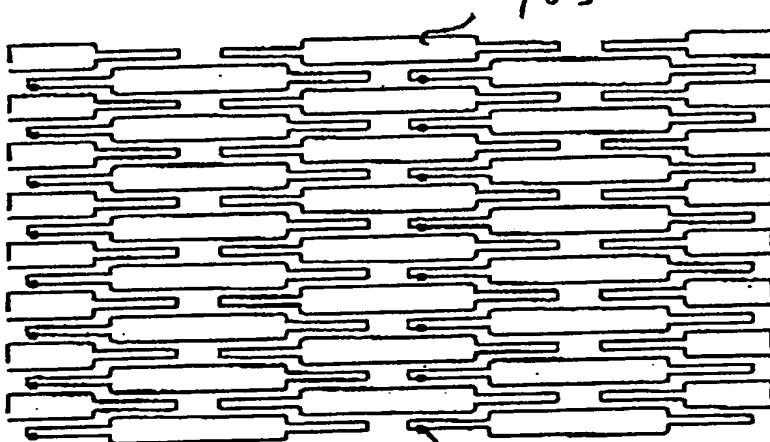
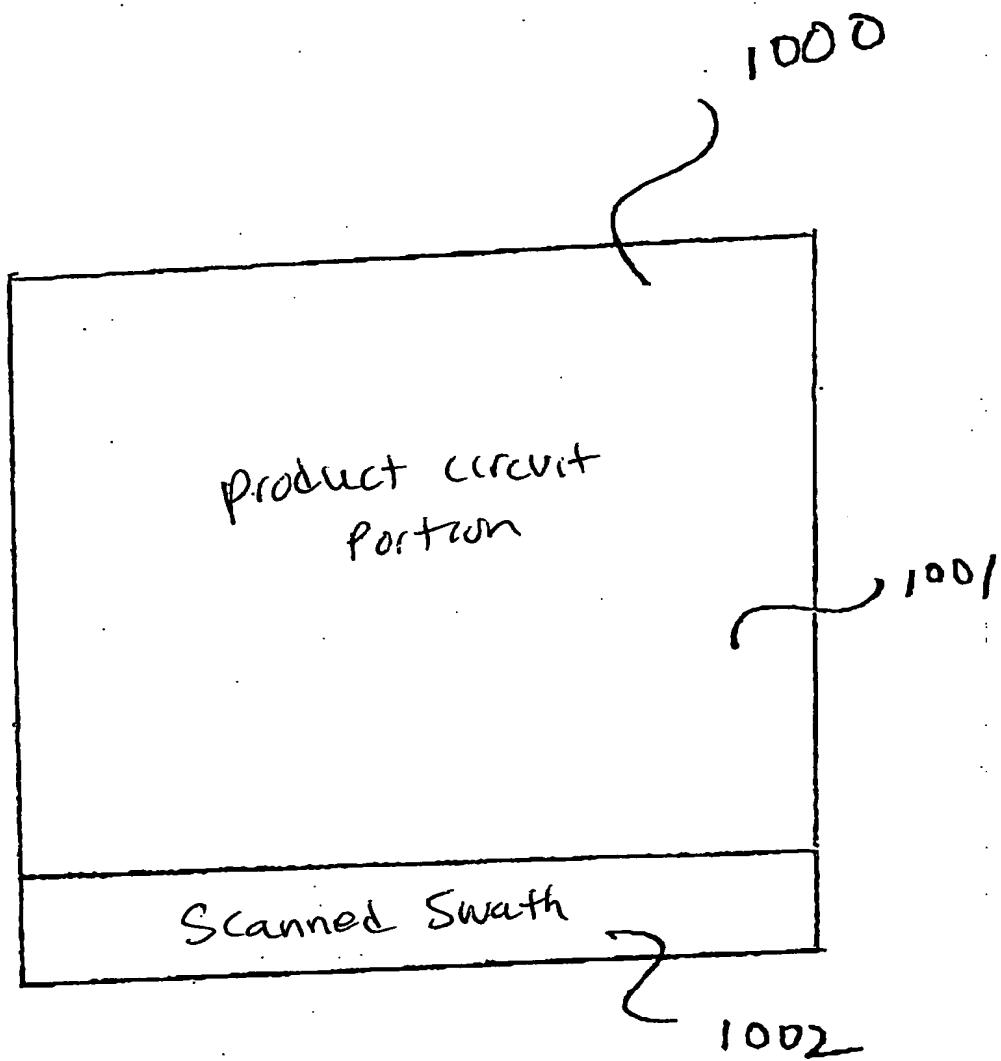


Fig. 26c: Redesign of Dummy Shapes into useful CMP Process Monitors

904

Fig. 27



09643055 - 032500

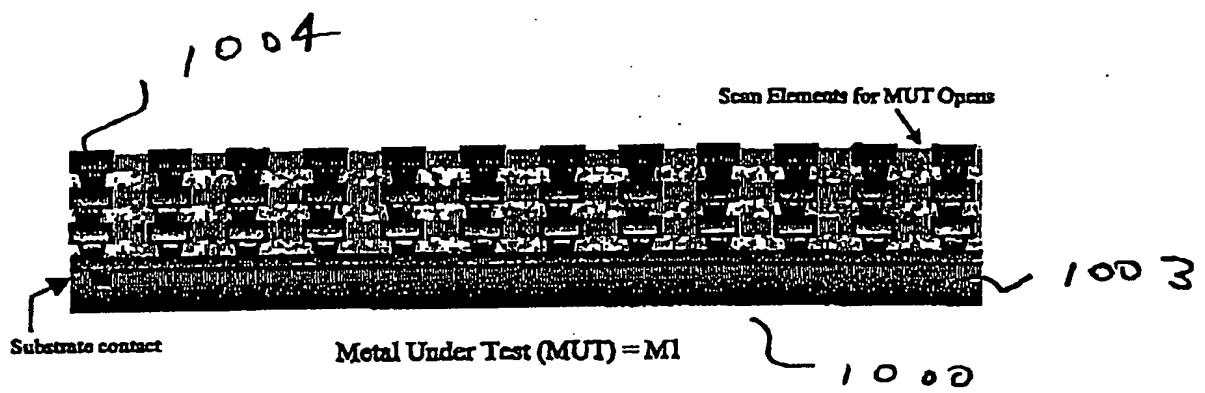
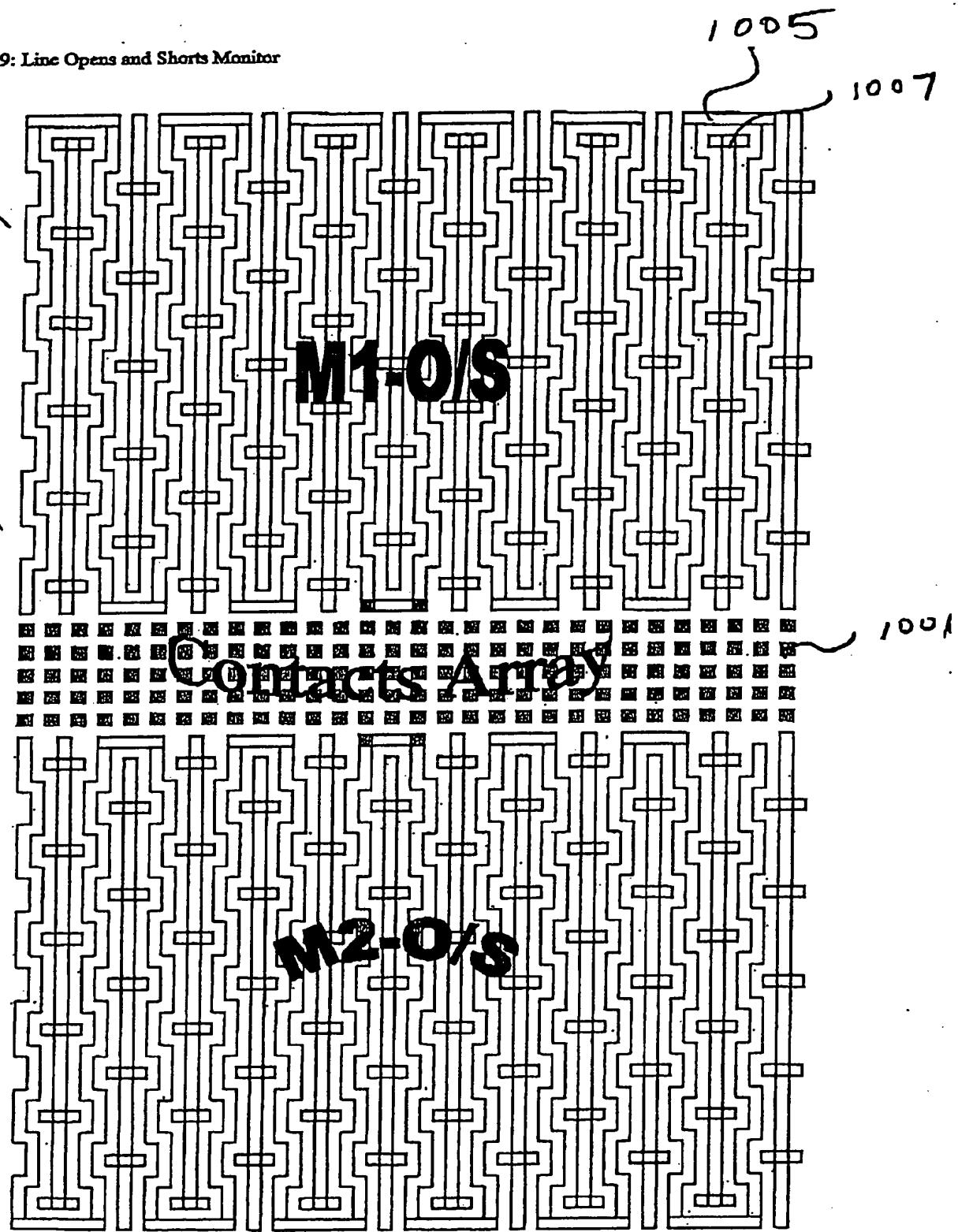
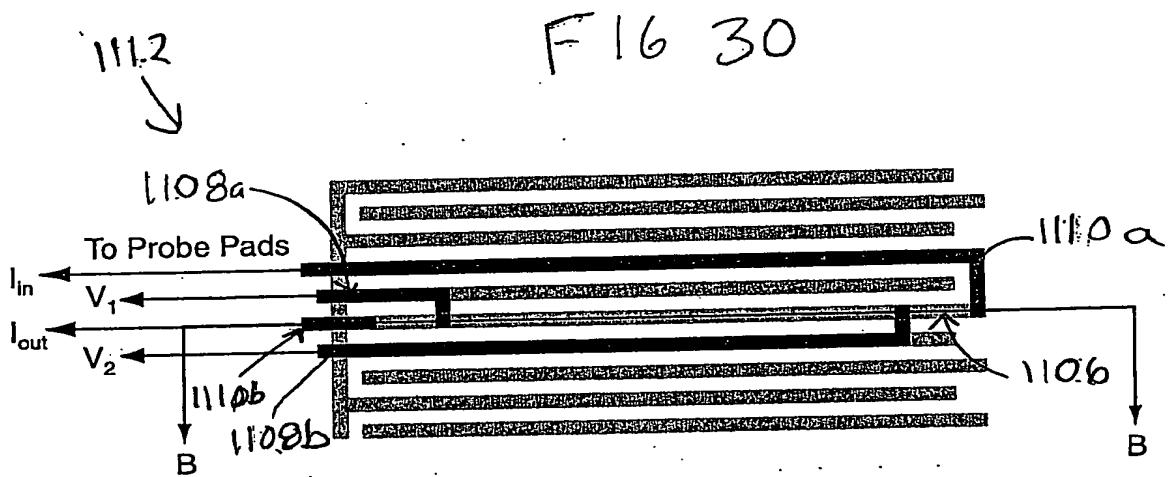
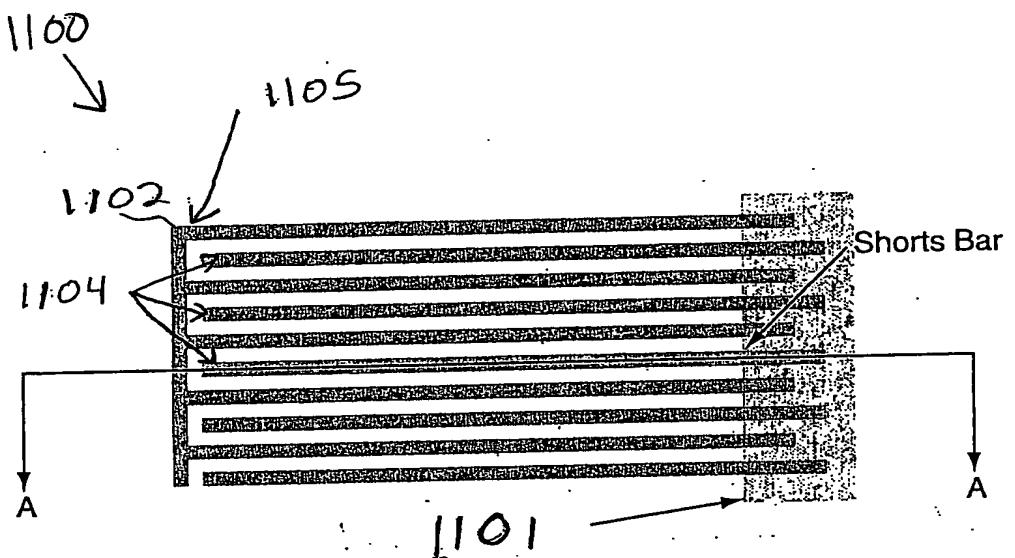


Fig. 28 : Cross-section View of the Vertical Taps over the Metal-under-Test Opens Monitor

09643095 - C62500

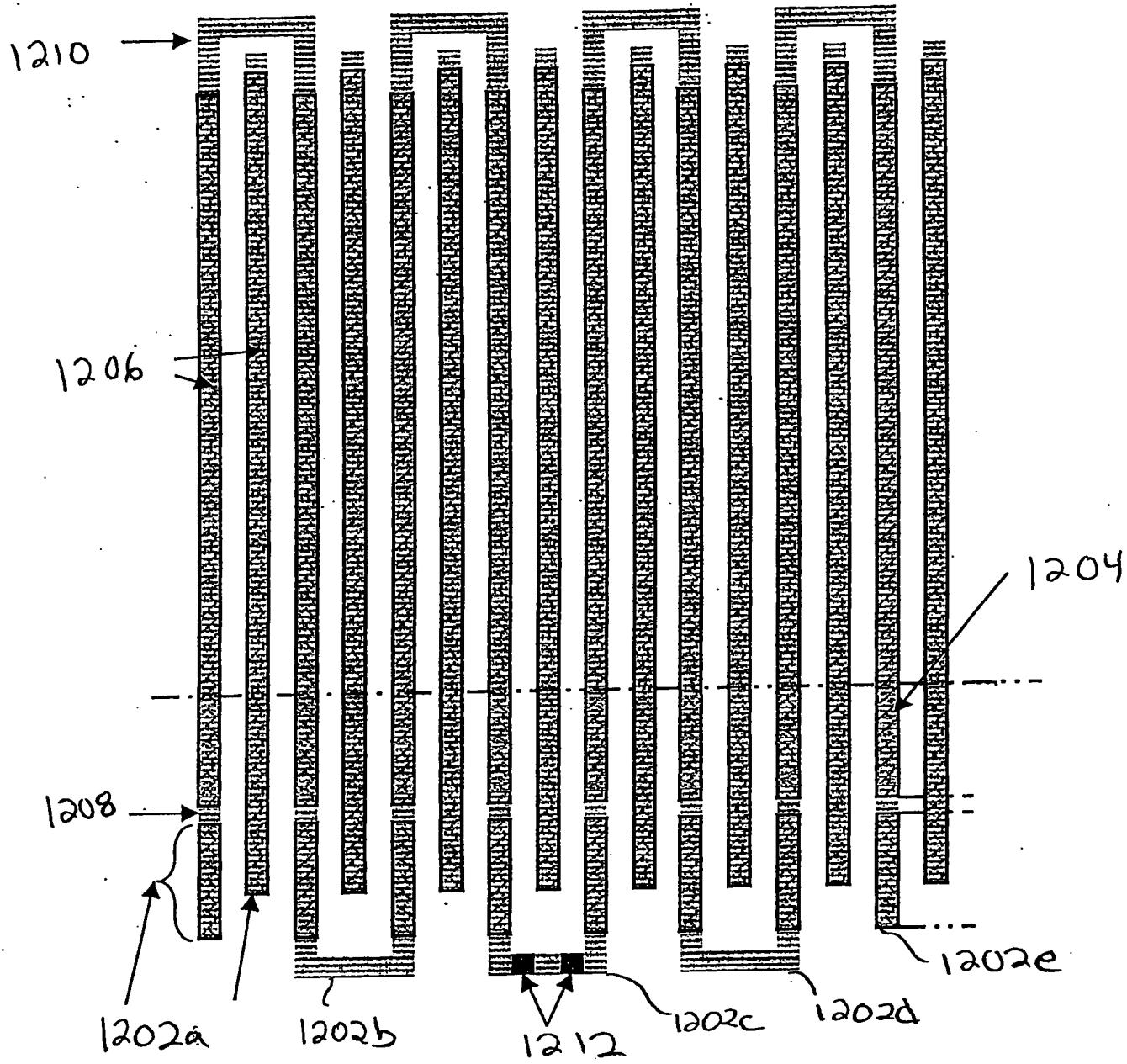
Fig. 29: Line Opens and Shorts Monitor





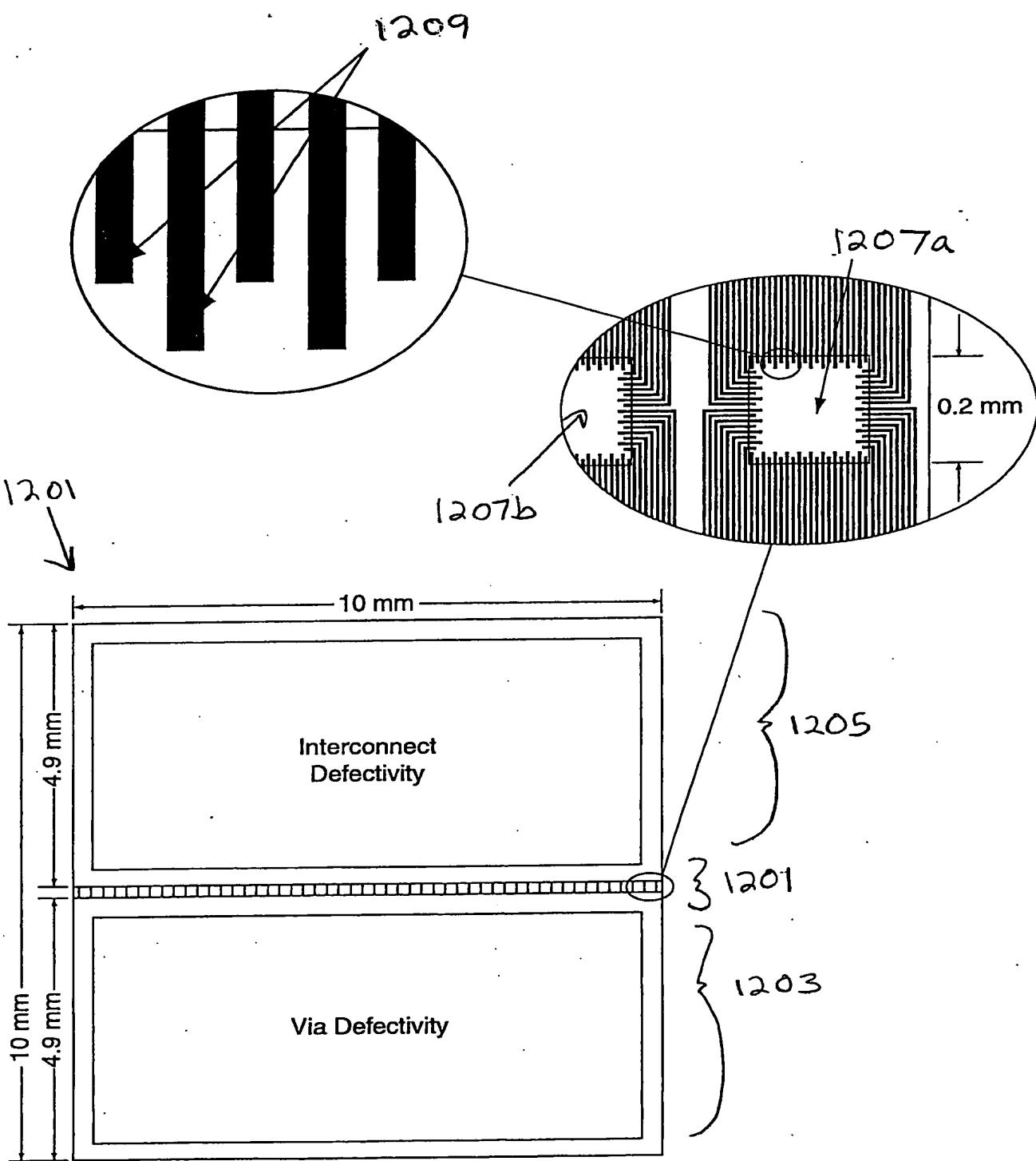
F16 31

00954-8095 - 032500



F 16. 32

F16. 33



09649095 - 082500

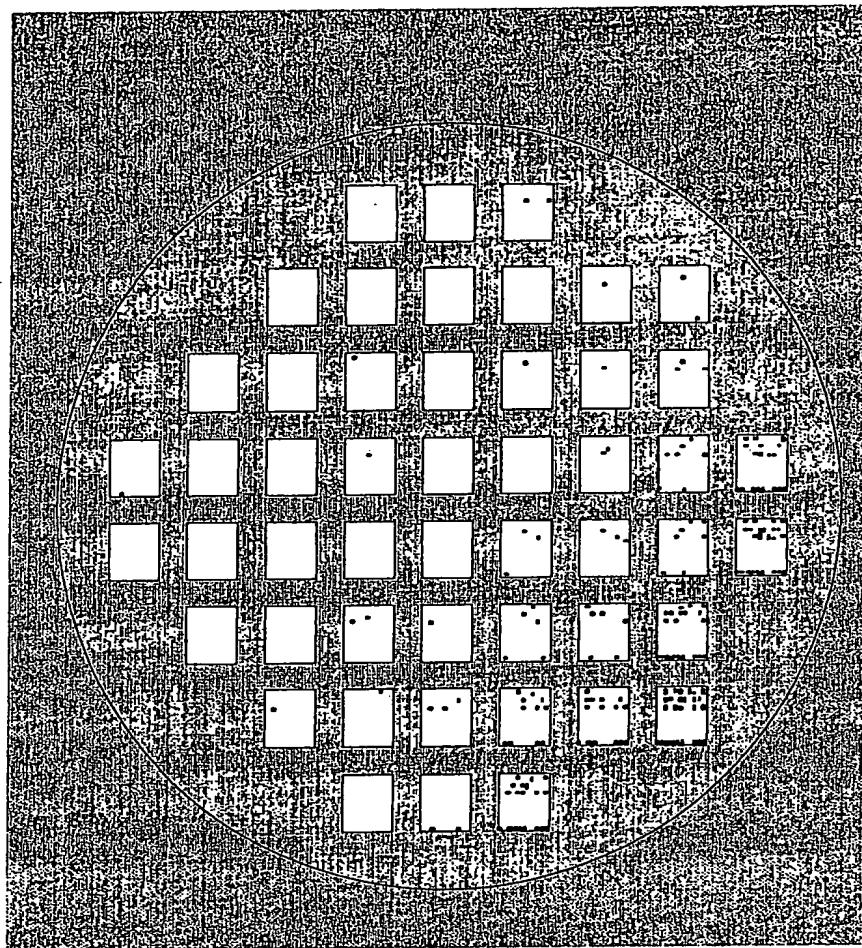


FIG. 34

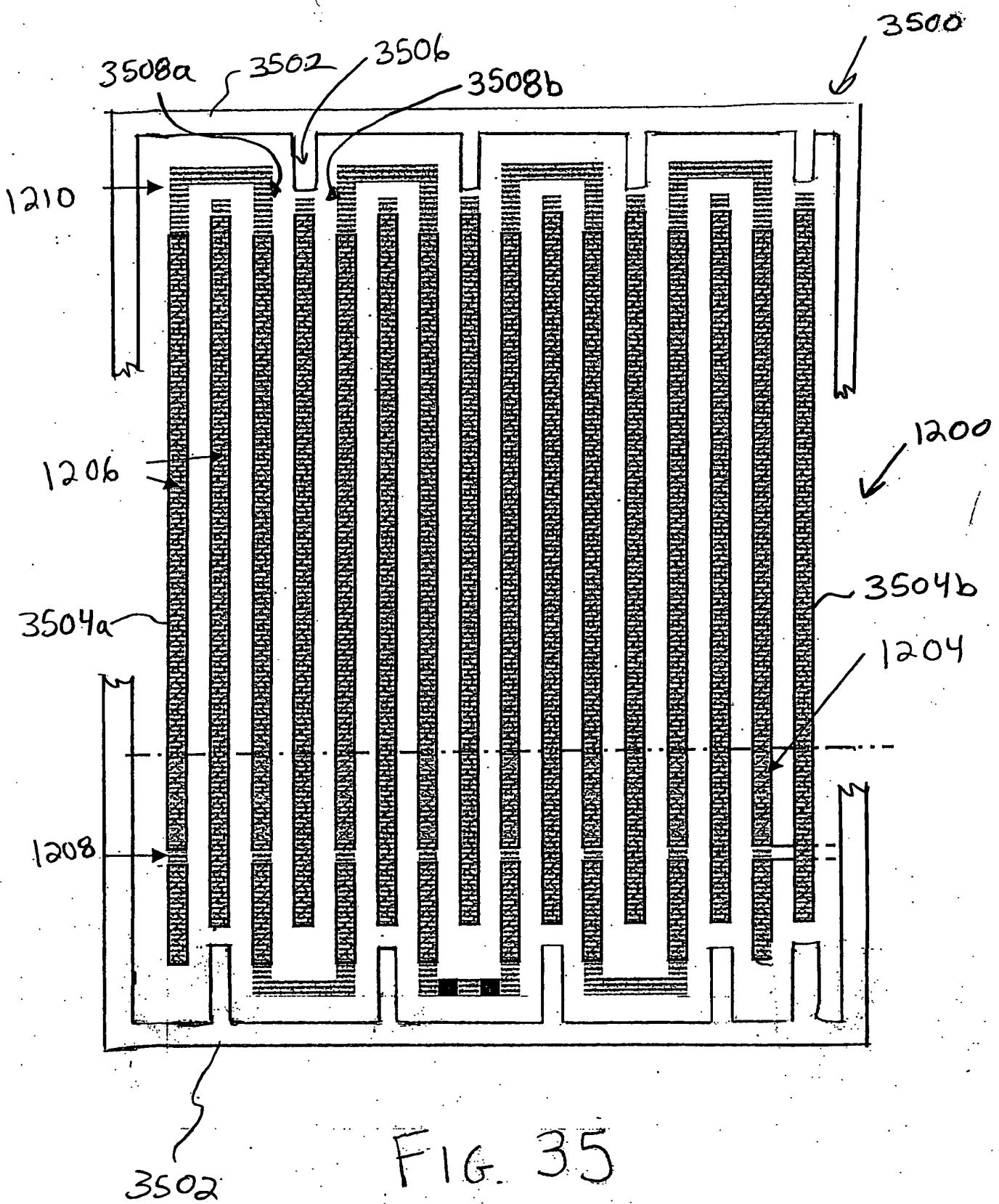


FIG. 35